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Standardization

**OPERATIONS AND RESOURCES
STANDARDIZATION**

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1. Air Force success depends in part on effectively using resources and fulfilling the responsibilities of joint allied operations. This directive establishes policies for using a standardization business process and identifying criteria to meet global objectives of defense obligations, to maintain a world class industrial and technology base, and to promote a robust American economy that is competitive in the world market.

2. The Air Force Departmental Standardization Office will establish a single integrated standardization business process to achieve economical use of resources and operations while meeting global objectives. The process will employ economy functions, measures and controls and involve Air Force participation in military, governmental, private sector, and international standardization activities.

2.1. The goal of the Air Force will be to obtain the highest practical level of standardization possible with the private sector, government and US allies in the areas of doctrine, materiel, products, processes, procedures, and criteria. The levels of standardization listed in ascending order, are compatibility, interoperability, interchangeability, and commonality.

3. Air Force participation in international commercial and military standardization (IMS) programs with our allies will include cooperative research, development, and acquisition (RD) arrangements and joint test programs. Particular emphasis will be placed on the areas of command, control, communications, and computer systems; avionics; munitions; automatic testing; components and spare parts; compatible battle-field surveillance, target designations, aircraft cross-servicing; and acquisition systems.

3.1. US military readiness and strengthening US industry will be the primary objectives for ratifying and implementing standardization agreements.

3.2. The Air Force will not support the adoption of or ratify any standard that conflicts with national, international, or US military practices, unless a peculiar military operational requirement exists, or a civil standard is unacceptable for military use. US joint publications will be the basis of US positions for developing, ratifying, and implementing IMS agreements. The Air Force will take the necessary steps to prevent an agreement from conflicting with other ratified standardization agreements.

4. The Air Force will participate in US private and public sector standardization activities to enhance the efficient use of resources and to achieve global objectives. Participation will include identifying and developing economic controls and criteria and harmonizing national military and civilian standardization needs.

4.1. Cooperation, based on defense conversion resources, between the Air Force and national public and private organizations will foster emerging technology and introduce it into national and international markets.

4.2. The Air Force will participate in standardization efforts with government agencies and Department of Defense (DoD) components to:

4.2.1. Minimize proliferation of items and equipment.

4.2.2. Maximize the use of existing items and equipment in designing new systems.

4.2.3. Reduce the Air Force supply system inventory by eliminating duplication.

4.2.4. Enhance performance, maintainability, reliability and timely availability of items, equipment, and systems.

4.2.5. Minimize life cycle costs.

4.2.6. Enhance competition.

5. The Air Force will use acceptable domestic and international commercial and military practices, processes, procedures, criteria, measures, designs, and products (Nongovernment Standards and Nondevelopmental Items) to increase readiness and enhance the Air Force and government efficiency. The preferred is to use Nongovernment Standards and Nondevelopmental Items rather than developing military-unique standards and products. Market research and analysis will be conducted to identify and determine the acceptability of commercial products.

6. Process analysis and design will be used to enhance functional and operational efficiency. The Air Force will use a continuous improvement process to maintain the currency of standardization documents and process definition tools will be used to determine the effectiveness of standardization areas.

7. This directive establishes the following responsibilities and authorities:

7.1. The Air Force Departmental Standardization Office (DepSO) is responsible for all Air Force standardization matters and acts for the Secretary of Defense as an extended office for those portions of the Defense Standardization Program assigned to the Air Force. This includes the responsibility and authority to direct the resources needed to accomplish standardization within the Air Force and to ensure DoD components provide participatory resources for those defense standardization programs assigned to the Air Force.

7.2. The DepSO establishes policy, manages the standardization program, establishes standardization functions, and assigns specific standardization areas to Air Force standardization management activities. Those management activities support and act as an extended staff for the Air Force Departmental Standardization Office (SAF/AQK) and International Standardization Office.

7.3. The DepSO fulfills his or her responsibilities regarding international military standardization through the Air Force International Standardization Office (HQ USAF/XOXX-ISO).

7.4. HQ USAF/XOXX-ISO will develop policy and administer the Air Force participation in the North Atlantic Treaty Organization Military Agency for Standardization (NATO MAS), Air Standardization Coordinating Committee (ASCC), and American-British-Canadian-Australian Armies (ABCA) IMS programs.

7.5. HQ USAF/XOXX-ISO will provide training to Air Force representatives to NATO MAS, ASCC or ABCA IMS meetings.

7.6. HQ USAF/XOXX-ISO will fund the travel of all Headquarters Air Force members who serve as the principal US representative to NATO MAS (Air Board) and ASCC IMS meetings.

8. See **Attachment 1** for measuring compliance with this directive.

9. See **Attachment 2** for terms explained.

10. See **Attachment 3** for implementing policy.

11. See **Attachment 4** for interfacing documents.

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Attachment 1

MEASURING COMPLIANCE WITH POLICY

A1.1. Process Compliance. The policy to establish an integrated standardization business process will be assessed by displaying the percentage of standardization areas having an integrated business process (**Figure A1.1.**). Data will be gathered from the management plans submitted each year by standardization management activities and an integrated definition (IDEF) process model prepared for those areas. The goal is to have an increasing percentage of standardization activities compliant with the policy to establish an integrated business process.

A1.2. Levels of Standardization. The policy to achieve the highest possible and practical level of international standardization **Figure A1.2.** will be assessed by showing the percentage of NATO MAS Air Board and ASCC standardization agreements ratified by the Air Force each year that achieved, in ascending order, compatibility, interoperability, interchangeability, and commonality. The objective is to have a growing percentage of agreements reach the level of commonality.

A1.3. Implementation of International Standardization Agreements. The policy is to have:

A1.3.1. Implementing documents referenced in each standardization agreement **Figure A1.3.**

A1.3.2. Each implementing document reference the international standardization agreements it supports.

A1.4. Non-Government Standards (NGS) Approval. The policy to achieve the highest possible degree of national standardization will be displayed as a percentage of NGS approved by the Department of Defense or the Department of Air Force **Figure A1.4.**

A1.5. Age of Standardization Documents. Standardization documents shall be reviewed every 5 years to ensure they are technically correct, to reflect the latest technology, and to enhance competition. As up to 2 years can be required to revise, coordinate, and publish new documents, the Air Force shall have no document which has not been reviewed for more than 7 years **Figure A1.5.**

Figure A1.1. Sample Metric of Process Compliance.

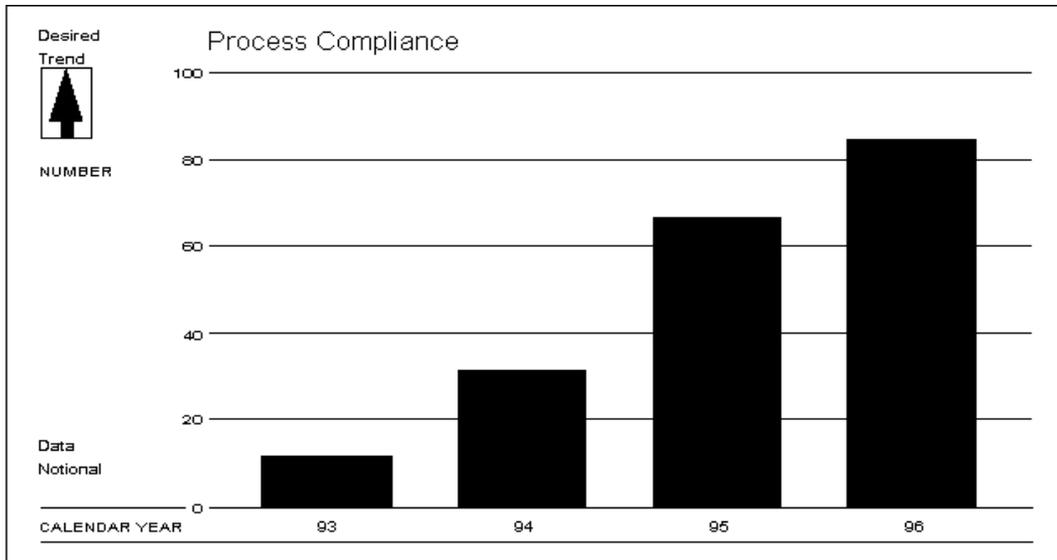


Figure A1.2. Sample Metric of International Standards Implementation.

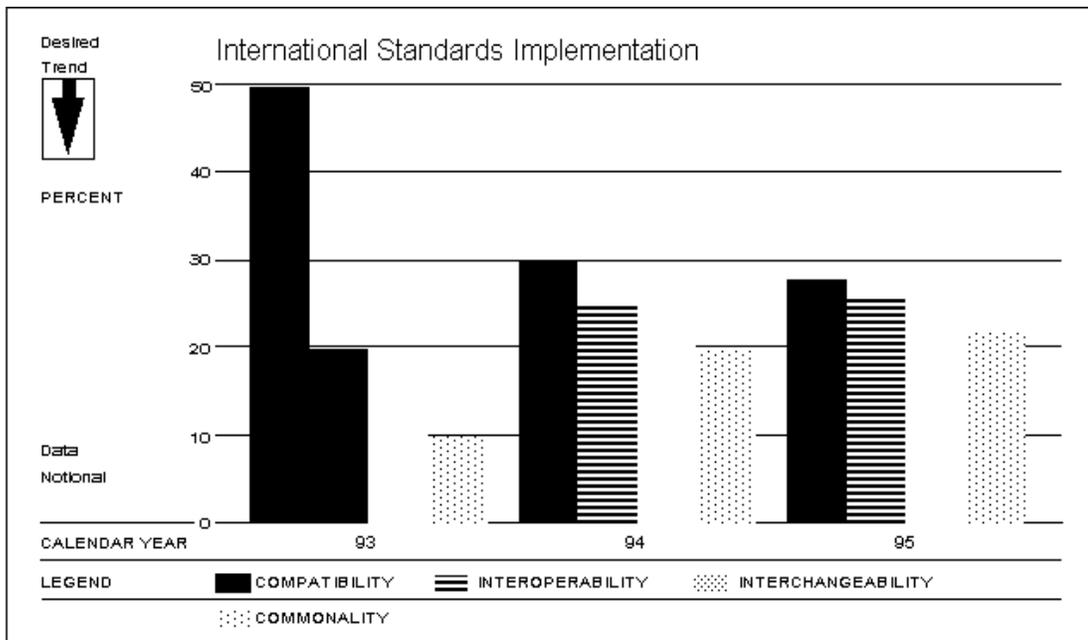


Figure A1.3. Sample Metric of Implemented International Agreements.

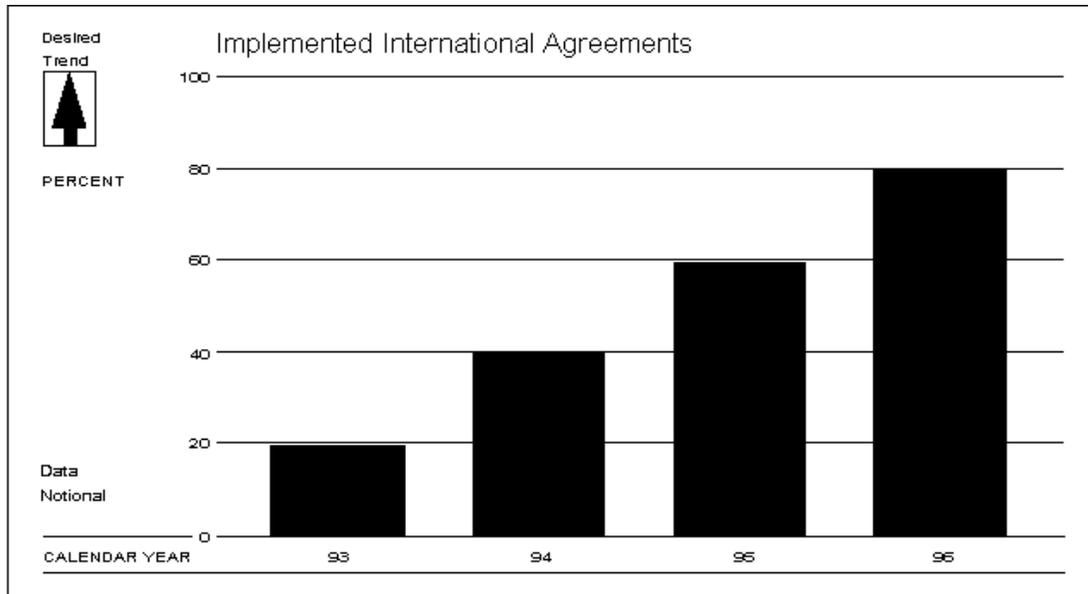


Figure A1.4. Sample Metric of Quantity Non-Government Standards Approved.

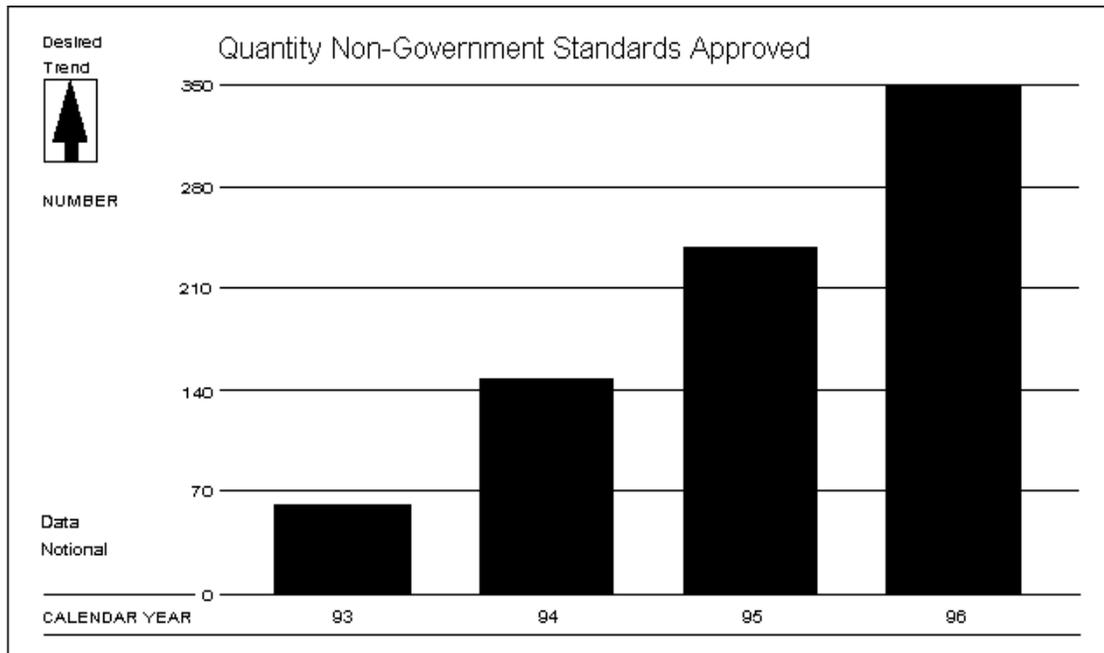
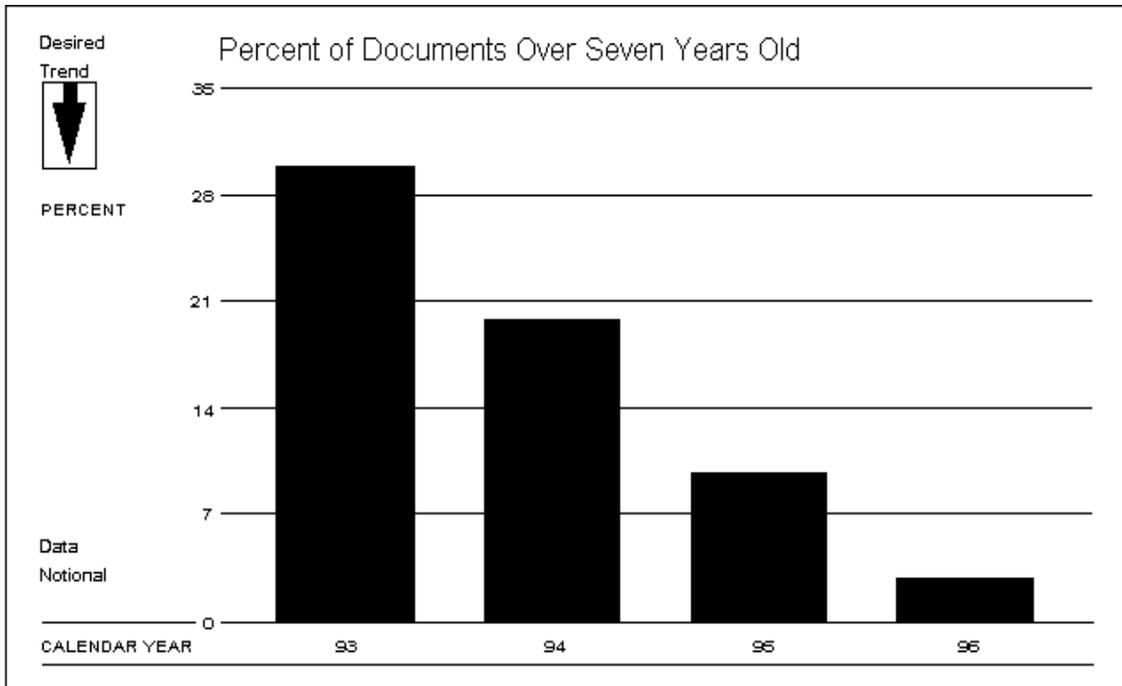


Figure A1.5. Sample Metric of Percent of Documents Over Seven Years Old.



Attachment 2

TERMS AND DEFINITIONS

A2.1. Air Standardization Coordinating Committee (ASCC). An international military standardization organization made up of Australia, Canada, New Zealand, the United Kingdom, and the United States established to achieve standardization among member nation air forces.

A2.2. American-British-Canadian-Australian Armies (ABCA). An international military standardization organization seeking to enhance standardization of the army among the same five nations as in Air Standardization Coordinating Committee, except New Zealand participates as an observer.

A2.3. Commonality:

A2.3.1. Department of Defense. A quality that applies to materiel or systems:

A2.3.1.1. Possessing like and interchangeable characteristics enabling each to be used, or operated and maintained, by personnel trained on the other without additional specialized training.

A2.3.1.2. Having interchangeable repair parts and or components.

A2.3.1.3. Applying to consumable items interchangeably equivalent without adjustment.

A2.3.2. North Atlantic Treaty Organization. A state achieved when groups of individuals, organizations or nations use common doctrine, procedures or equipment. (Joint Publication [JP] 1-02)

A2.4. Compatibility. Capability of two or more items or components of equipment or material to exist or function in the same system or environment without mutual interference. (JP 1-02)

A2.5. Extended Staff. Activities or individuals that are assigned National, Department of Defense, or Air Force-level responsibility and authority. Those activities and individuals act for and function as a part of the office assigning designated areas of responsibilities (standardization).

A2.6. Interchangeability. A condition that exists when two or more items possess such functional and physical characteristics as to be equivalent in performance and durability, and are capable of being exchanged one for the other without alteration of the items, or adjoining items, except for adjustment, and without selection for fit and performance. (JP 1-02)

A2.7. Integrated Definition (IDEF [Integrated Computer-Aided Manufacturing Definition]). A standard graphic language for describing systems. It provides a structured description of the functional relationships of systems complicated by the interactions of people, computers, and machinery. A standard process modeling method that is founded on a few basic concepts; purpose, scope, and viewpoint; and incorporates a graphic syntax, diagramming techniques, and supporting documentation.

A2.8. Interoperability. The ability of systems, units, or forces to provide services to and accept services from other systems, units or forces and to use the services so exchanged to enable them to operate effectively together.

A2.8.1. Department of Defense. The condition achieved among communication-electronic systems or items of communication-electronic equipment when information or services can be

exchanged directly and satisfactorily between them and or their users. The degree of interoperability should be defined when referring to specific cases. (JP 1-02)

A2.9. Military Agency for Standardization (MAS). The primary military activity in the North Atlantic Treaty Organization tasked with standardization.

A2.10. Nondevelopmental Item (NDI). A generic term that covers materiel available from sources with little or no development effort required by the government. NDI includes items:

A2.10.1. Obtained from a domestic or foreign commercial marketplace.

A2.10.2. Already developed and in use by the Military Departments, Defense Agencies, or other government agencies.

A2.10.3. Already developed by foreign governments that can be supplied according to mutual defense cooperation agreements and Federal and Department of Defense acquisition regulations.

A2.11. Nongovernment Standard (NGS). A standardization document developed by a private sector association, organization, or technical society that plans, develops, establishes, or coordinates standards.

A2.12. Standardization. A process for achieving the most efficient use of Air Force, Department of Defense, and government (Federal, state, and local) resources (money, manpower, readiness, time, facilities, and natural resources), and ensuring the Air Force can effectively and efficiently participate in combat, contingency and exercise operations with other US Services and National Allied Treaty Organization allies. It is a continuous improvement process that provides economy controls and criteria for:

A2.12.1. Improving the operational readiness of the Military Departments and Defense Agencies.

A2.12.2. Enhancing the interoperability of US and allied military operations, equipment, and supplies.

A2.12.3. Enhancing the interchangeability and interoperability of equipment and supplies between the Military Departments and Defense Agencies.

A2.12.4. Improving interoperability and participation between the Department of Defense, industry customers, and suppliers.

A2.12.5. Planning and accelerating the insertion of new technology into military and domestic products.

A2.12.6. Improving and sustaining the industrial and technology base.

A2.12.7. Establishing uniform requirements for design, construction, and maintenance of military installations, facilities, and civil works.

A2.12.8. Conserving resources (money, manpower, time, facilities, and natural resources).

A2.12.9. Improving the logistics support of weapon systems supplies by reducing the variety of items, processes, and practices.

A2.12.10. Promoting competition.

A2.13. Standardization Areas. Standardization includes those categories of standardization listed in *Standardization Directories (SD-1)*, the *American-British-Canadian-Australian (ABCA) Handbook* and *Air Standardization Coordinating Committee (ASCC) Handbook*. It also includes Item Reduction Studies (IRS), Qualification, management of standardization documents, Metrication, Nondevelopmental Items (NDI), Parts Control Program, developing and maintaining standard and preferred items, processes, and Parts Control Program, developing and maintaining standard and preferred items, processes, and criteria, Interchangeability and Substitutability (I), Nongovernment Standards (NGS), and those areas of standardization within the Joint Chief of Staff's and Joint Logistics Commander's standardization functions and efforts.

A2.14. Standardization Management Activity (SMA). Refers to an activity having the responsibility for an individual standardization area identified above. An SMA may function as Lead Standardization Activity, Participating Activity, Preparing Activity, Custodian, Military Coordinating Activity, Review Activity, Adopting Activity, or Item Reduction Activity.

Attachment 3

IMPLEMENTING POLICY

Public Law 82-436, *Cataloging and Standardization Act* July 1, 1952

Public Law 84-1028, *Amendment to the Cataloging and Standardization Act* October 12, 1982

Public Law 90-629, Title 22, United States Code Sections 2751 and 2796d, *Arms Export Control Act (as Amended)* October 22, 1968

Public Law 99-145, (Title 11), *DoD Authorization Act (Matters Relating to NATO)* October 29, 1985

Public Law 100-418, *Omnibus Trade and Competitiveness Act of 1988* August 23, 1988

Title 10, United States Code, Section 2325, *Preference for Nondevelopmental Items* October 18, 1982

Title 10, United States Code, Chapter 145, Sections 2451, Through 2457, *Cataloging and Standardization and Standardization of Equipment With North Atlantic Treaty Organization Members* October 12, 1982

Public Law 94-168, Sections 205a-205k, *Metric Conversion Act of 1975* December 23, 1975

DoD Directive 2010.6, *Standardization and Interoperability of Weapons Systems and Equipment With NATO* March 5, 1980

DoD Directive 5100.53, *US Participation in Certain NATO Groups Related Research, Development, Production, and Logistics Support of Military Equipment* July 29, 1967

Chief of the Joint Chiefs of Staff (CJCS) Memorandum of Policy 46, *International Military Rationalization, Standardization, and Interoperability Between the United States and its Allies and other Friendly Nations* June 4, 1992

Office of Management and Budget Circular A-119, *Federal Participation in the Development and use of Voluntary Standards* October 26, 1982

Attachment 4

INTERFACING DOCUMENTS

AFPD 10-6, *Mission Needs and Operational Requirements* (formerly AFR 57-1)

AFPD 25-3, **NATO and Allied Logistics Support**

AFPD 33-1, *Command, Control, Communications, and Computer C4 Systems*

AFPD 51-7, *International Law*

AFI 60-102, *Economy Needs and Requirements*

AFI 60-103, *International Standardization*

AFI 60-105, *Applying Economy Controls and Criteria*

AFPD 63-1, *Acquisition System*

AFPD 63-4, *Contracted Advisory and Assistance Services*